

## PATENT ABSTRACTS OF JAPAN

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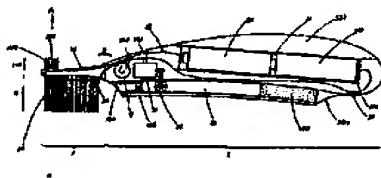
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(54) PORTABLE BODY HAIR REMOVING DEVICE AND BODY HAIR REMOVING METHOD USING THIS DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To smoothen the cut surfaces of the body hair and to inexpensively, easily and safely remove the body hair while preventing the occurrence and infection of various kinds of dermatologic and urologic wounds and diseases. SOLUTION: A comb-like part 1 and a clamp part 3 are connected and resistance wires 12 having electroconductivity are successively passed through the teeth 11 of the tooth part 11 of the comb-like part 1. Current is applied to the resistance wires 12 from a power source section 31 built in the clamp part 3 and the body hair is cauterized and cut by the generated heat thereof.



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## CLAIMS

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[Claim(s)]

[Claim 1]A grasping part (3) which is connected with a comb-like part (1) in a comb-like part (1) and an articulated section (2) which have a tooth part (11) and which can be grasped, A resistance level (12) of electrical conductivity which penetrates a gear tooth (111) of a power supply section (31) and a tooth part (11) which were built in a grasping part (3) one by one, A portable hair stripper which consists of a switch part (33) which opens and closes current which is established in the middle of a cord member (32) which supplies current to a resistance level (12) penetrating a comb-like part (1), an articulated section (2), and/or a grasping part (3), and a cord member (32), and is supplied to a resistance level (12).

[Claim 2]A tubular part (34) of a cave which penetrates a grasping part (3) to a longitudinal direction from the tooth part (11) side near an articulated section (2) to near the end of an opposite hand of a grasping part (3), A suction opening (341) of a tubular part (34) which carries out an opening near an articulated section (2), an outlet (342) which carries out an opening near the end of an opposite hand of a grasping part (3), A motor for driving (35) built in a grasping part (3), a cord member (321) which branches from a cord member (32) and supplies current to a motor for driving (35), And the portable hair stripper possessing a suction means which consists of a fan part (36) which it is equipped in a tubular part (34), and is driven with a motor for driving (35) according to claim 1.

[Claim 3]The portable hair stripper according to claim 2 providing a filter part (343) for dust collection in a suction opening (341) and a tubular part (34) between fan parts (36).

[Claim 4]The portable hair stripper according to claim 3 providing a filter part (344) for deodorization in a fan part (36) and a tubular part (34) between outlets (342).

[Claim 5]The portable hair stripper possessing a light (4) to which current is supplied from a power supply section (31) via a cord member (322) which is installed near an articulated section (2) and branches from a cord member (32) according to claim 4.

[Claim 6]A hair removing method using the hair stripper according to claim 1.

[Claim 7]A hair removing method using the hair stripper according to claim 2.

[Claim 8]A hair removing method using the hair stripper according to claim 3.

[Claim 9]A hair removing method using the hair stripper according to claim 4.

[Claim 10]A hair removing method using the hair stripper according to claim 5.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to the hair removing method using the portable hair stripper and this device from which hair is removed using generation of heat by the resistance level of electrical conductivity.

[0002]

[Description of the Prior Art]As the device and method of removing hair other than the hair, a laser surgical unit, tweezers, a razor, scissors, etc. were known conventionally.

[0003]

[Problem(s) to be Solved by the Invention]In recent years, removing temporarily or eternally a part of hair near an inguinal region has come to be called for regardless of sex and age cosmetics or for reasons of sanitation by what is called a clean intention, changes of a swimming suit design, etc. however -- if laser surgical units are not fixed authorized personnel, cannot operate them, and a device and their expense are large-sized and expensive -- the man in the street -- the actual condition is having come to spread hardly through the younger age group at things. Therefore, the removing method which the \*\*\*\*ing person himself gives to the self body using tweezers, a razor, or scissors had actually spread.

[0004]However, when carrying out extraction of every one hair with tweezers, it was inefficient and it was not rare to cause the various skin disease which it is not only accompanied by a pain, but originates in damage to a hair root. In tweezers, it is an alternative of whether to carry out extraction and hair ends were not able to be arranged, either.

[0005]When a razor removed the hair near an inguinal region, there was evil leading to the sickness and wound of various dermatology systems or a urology department system. That is, first, a razor may bring a very small wound to the skin or membrane, and may present the so-called condition of rash caused by shaving to it.

[0006]Next, when a razor removes the hair of a specific part thoroughly, Since the cutting plane of hair became sharp, at the time of sexual intercourse, it might damage the partner's skin or membrane, and according to the cutting plane, a \*\*\*\*ing person's own skin or membrane rubs mutually and not only gets damaged, but might give the partner painful itching paraesthesia and displeasure. Thus, the wound generated by the section of sharp hair also serves as a hotbed where an infectious dermatology system disease and venereal disease spread with transition of sexual morality.

[0007]It was not easy to perform at least for a short time technically to remove a part of hair and to cut the hair ends to an even length to suitable length with a razor. or [ therefore, / that individual hair is thoroughly removed when using a razor ] -- or it is not removed at all -- it becomes that alternative in many cases.

[0008]It is not removed at all, but the neglected hair is involved in between membrane depending on the length at the time of sexual intercourse, etc., and there is a danger of causing what is called a hair piece phenomenon that damages a reproductive organ. It is legible Osamu that such a hair piece serves as a hotbed where further various kinds of illnesses spread.

[0009]It is unsuitable, in order to cut to an even length very short or to cut to an even length to the length of the grade which does not raise a hair piece, since hair generally is not a straight hair also when based on scissors. The evil which becomes sharp [ a cutting plane ] was the same as the razor.

[0010]carry out for carrying out on the way -- carry out for carrying out at a house -- when based on

tweezers, a razor, or scissors, consideration special to the settlement was also required so that the removed piece of hair might not adhere within and without clothes.

[0011]When avoiding the public notice on the way etc. and removing hair on the closed ring boundary where Lighting Sub- Division is insufficient, it is uncertain and also dangerous with the method by the razor or scissors. Therefore, concomitant use of auxiliary lights, such as a flashlight, was desirable.

[0012]An object of this invention is to provide the hair removing method using the cheapness, the easy and safe portable hair stripper, and this device which \*\* to prevention of various sickness and wound, such as a dermatology system or a urology department system.

[0013]

[Means for Solving the Problem]In a device and a method of this invention in order to attain the above-mentioned purpose, The tooth part 11. To the resistance level 12, penetrating the resistance level 12, the comb-like part 1, the articulated section 2, and/or the grasping part 3 of electrical conductivity which penetrates the gear tooth 111 of the comb-like part 1 which it has, the grasping part 3 which is connected with the comb-like part 1 by the articulated section 2, and which can be grasped, the power supply section 31 built in the grasping part 3, and the tooth part 11 one by one current. Constitute a hair stripper with the cord member 32 to supply, and \*\* is made to energize and generate heat from the power supply section 31 to the resistance level 12 via the cord member 32, cautery cutting is carried out and hair which contacts by the generation of heat is removed. A hollow structured may be sufficient as the comb-like part 1 and the grasping part 3, and packing structure with which construction material was filled up may be sufficient as them.

[0014]Although there is no restriction in particular in the length of a gear tooth of the tooth part 11, in order to remove hair so that hair piece prevention may be possible, 15- 30 mm is preferred and 20- 25 mm is more preferred.

[0015]There is no restriction in particular in a mutual interval of the gear tooth 111 of the tooth part 11. However, if it approaches mutually too much, that of\*\*\*\* will become difficult about hair, if isolated to another side excess, human body tissue may invade between the gear teeth 111, and the resistance level 12 may be contacted. Therefore, generally, an interval of the gear tooth 111 is 0.5- 5.0 mm, is 0.5- 3.0 mm preferably, and is 0.5- 2.0 mm more preferably.

[0016]Although there is no restriction in particular in a penetration position of the resistance level 12 which penetrates the gear tooth 111 of the tooth part 11 one by one, in order to attain the purpose of this invention effectively, 1- 3 mm is preferred toward a branch location of the gear tooth 111 to a tooth point, and 1.5- 2.0 mm is more preferred.

[0017]Although there is no restriction in particular in construction material of the resistance level 12, it is a point of a price and a nickel chrome alloy etc. are recommended.

[0018]If cautery of hair is possible for the electric resistance characteristic of the resistance level 12, it will be good and there will be no restriction in particular.

[0019]The paragnath part 11a for finishing may be formed in the comb-like part 1 so that it may disagree with the tooth part 11. The paragnath 111a of the paragnath part 11a is also made to penetrate the small resistance level 12a one by one. Current is supplied to the small resistance level 12a from the power supply section 31 via the cord member 32 and the 32a. Besides a mechanism from which hair is removed by the small resistance level 12a is based on the resistance level 12, it is the same.

[0020]About a mutual interval of the paragnath 111a of the paragnath part 11a, it is the same as it of the gear tooth 111 of the tooth part 11. Although there is no restriction in particular in the length of the paragnath 111a, in order to attain the purpose of finishing, 4- 10 mm is preferred and 2- 5 mm is more preferred.

[0021]Although there is no restriction in particular in a penetration position of the small resistance level 12a, in order to attain the purpose of finishing, 1- 3 mm is preferred toward a branch location of the paragnath part 11a to a tooth point, and 1.5- 2.0 mm is more preferred. About construction material and the electric mortgage characteristic of the small resistance level 12a, it is the same as it of the resistance level 12.

[0022]In order to keep generation of heat by current and a resistance level which flow into the resistance level 12 or the small resistance level 12a from getting across to a human body directly, it is desirable to make construction material of the comb-like part 1 whole with a heat-resistant synthetic resin, Ceramics Sub- Division, etc. A heat-resistant synthetic resin, etc. nothing, and its complementary

can also adopt conductivity and electric heat nature, or construction material of non-heat resistance, such as metal, wood, and a non-heat-resistant synthetic resin, only for a portion which the resistance level 12 of the gear tooth 111 penetrates. A ceramic member of ring shape, etc. may be fitted in a penetrated part of the resistance level 12 or the small resistance level 12a.

[0023]The power supply section 31 consists of the singular number which can be detached and attached freely, two or more dry cells or the battery charger 311, and its receiving device 312. In order to open and close suitably and to save electricity in the middle of the cord member 32 which ties the power supply section 31 and the resistance level 12, the switch part 33 is formed. Since a dry cell or the battery charger 311 is made exchangeable, the lid member 323 which can be opened and closed freely can be formed in the receiving device 312 neighborhood.

[0024]The comb-like part 1 is connected with the grasping part 3 in the articulated section 2, and the grasping part 3 is constituted by shape which makes grasping of this whole device easy. It may be joined by attachment-and-detachment impossible and the articulated section 2 may be constituted, enabling free attachment and detachment. When it can detach and attach freely, it is necessary to provide a point of contact which can be freely detached and attached in the middle of the cord member 32 from the power supply section 31 to the resistance level 12. Several comb-like parts 1 from which performance differs can also be constituted so that it may be exchangeable.

[0025]The tubular part 34 of a cave penetrated inside the grasping part 3 at a longitudinal direction from the tooth part 11 side of the articulated section 2 neighborhood to near the end of an opposite hand of the grasping part 3 is formed. Establish the suction opening 341 of the tubular part 34 near [articulated section 2] the tooth part 11 side, and the outlet 342 is formed near the end of an opposite hand of the grasping part 3. The cord member 321 which branches from the motor for driving 35 and the cord member 32 in the grasping part 3, and supplies current to the motor for driving 35 is made to build in, the fan part 36 driven with the motor for driving 35 in the tubular part 34 is equipped, and a suction means of a cut piece of hair and a cautery smell is constituted. The suction opening 341 is constituted by suitable shape so that suction may become easy. As for current supplied to the motor for driving 35, it is preferred to be opened and closed by cooperation by the switch part 33.

[0026]In order to collect pieces of hair, the filter part 343 for dust collection may be equipped in the suction opening 341 and the tubular part 34 between the fan parts 36. A filter of the filter part 343 for dust collection may be constituted in one with the tubular part 34, and it may comprise the tubular part 34 so that it may be removable. Generally, directions of removable composition are facilities at cleaning or exchange of a filter.

[0027]an eye of a filter of the filter part 343 for dust collection -- a piece of hair -- an effectually collectable grade -- with -- it is good and there is no limitation in particular.

[0028]a piece of hair collected by the filter part 343 for dust collection -- each time -- this device -- leaning -- etc. -- carrying out -- from the suction opening 341 -- it may remove -- it carried out and accumulated to some extent -- the time -- collecting -- it may remove. Since it keeps a piece of hair from being scattered about during carrying of this device in removing collectively, it is possible to provide a lid member which can be freely opened and closed to the suction opening 341.

[0029]The filter part 344 for deodorization is formed in the fan part 36 and the tubular part 34 between the outlets 342, and a cautery smell generated by cautery of hair is removed. A filter of the filter part 344 for deodorization may be constituted in one with the tubular part 34, and it may comprise the tubular part 34 so that it may be removable. Generally, directions of removable composition are facilities at cleaning or exchange of a deodorant.

[0030]Although there is no restriction in a deodorant used for the filter part 344 for deodorization, it is a point of expense and activated carbon, glass fiber, silica gel, a boiling stone, etc. are preferred, for example.

[0031]The light 4 is formed in the articulated section 2 neighborhood, and by the cord member 322 which branches from the cord member 32, current may be supplied to the light 4 from the power supply section 31, and it may constitute so that a situation of hair removal can be easily observed at the time of use of this device. As for current supplied to the light 4, it is preferred to be opened and closed by cooperation by the switch part 33. It is also possible to constitute so that a simple mirror may be installed near a light and a situation of hair removal can be observed still more easily.

[0032]The light 4 may be installed in the outside of this device, and may be made to build in. When making it build, for example, it may be made to fit into the articulated section 2 neighborhood, and the

portion concerned may be installed in transparency, nothing, and its inside. Although not necessarily limited, a gestalt made to build in transparent material in view of the portability of this device is preferred. But it is desirable to constitute the portions concerned of the comb-like part 1 and/or the grasping part 3 from transparent material, and to make it a beam of light from the light 4 penetrate an inside.

[0033]Although a situation of transparency and the opacity of the comb-like part 1, the articulated section 2, and the grasping part 3, and color is arbitrary, from a decorative viewpoint, yellow, blue, rose pink, black, etc. are preferred, for example. It is also possible to make in what is called skeleton specification that an internal structure can recognize visually from the exterior. [0034]

[Embodiment of the Invention]An embodiment of the invention is described with reference to the Drawings based on working example. Drawing 1 is a cross-sectional view of the portable whole hair stripper of this invention. However, since the comb-like part 1 and the grasping part 3 are a hollow structured or packing structure, they are omitting the slash. In drawing 1, the comb-like part 1 which has the tooth part 11 is connected with the grasping part 3 which can be grasped in the articulated section 2. The power supply section 31 is built in the grasping part 3, and current is supplied to the resistance level 12 of electrical conductivity via the cord member 32. The resistance level 12 penetrates the gear tooth 111 of the tooth part 11 one by one. The switch part 33 which opens and closes current in the middle of the cord member 32 is formed. The power supply section 31 comprises a dry cell or the battery charger 311, and its receiving device 312.

[0035]In the grasping part 3, the tubular part 34 of a cave has penetrated at the longitudinal direction from the tooth part 11 side of the articulated section 2 neighborhood to near the end of the opposite hand of the grasping part 3. The tubular part 34 carries out the opening of the suction opening 341 near [articulated section 2] the tooth part 11 side, and is carrying out the opening of the outlet 342 near the end of the opposite hand of the grasping part 3.

[0036]The motor for driving 35 is built in the grasping part 3, and the cord member 321 which branches from the cord member 32 supplies current to this. The fan part 36 is equipped in the tubular part 34, and it drives with the motor for driving 35.

[0037]In the suction opening 341 and the tubular part 34 between the fan parts 36, the filter part 343 for dust collection is equipped.

[0038]The filter part 344 for deodorization is equipped in the fan part 36 and the tubular part 34 between the outlets 342.

[0039]The light 4 is installed in the articulated section 2 neighborhood, and current is supplied to this from the power supply section 31 via the cord member 322 which branches from the cord member 32.

[0040]The paragnath part 11a is formed in the opposite hand of the tooth part 11 of the comb-like part 1. The small resistance level 12a which penetrates the gear tooth 111a of the tooth part 11a one by one is formed, and current is supplied to this from the power supply section 31 via the cord member 32a which branches from the cord member 32. In drawing 1, since it crosses complicated, the cord member 32a is omitted.

[0041]Drawing 2 is drawing of longitudinal section of the comb-like part 1 of the portable hair stripper of this invention. The tooth part 11 and the paragnath part 11a are formed in the comb-like part 1, and the gear tooth 111 of the tooth part 11 and the paragnath 111a of the paragnath part 11a are made to penetrate the resistance level 12 and the small resistance level 12a one by one in drawing 2, respectively. Current is supplied to the resistance level 12 and the small resistance level 12a from the cord member 32 and the cord member 32a, respectively.

[0042]Drawing 3 is schematics, such as a cord member in the portable hair stripper of this invention. In drawing 3, current is supplied to the resistance level 12 via the cord member 32 from the power supply section 31. Current is supplied to the motor for driving 35 via the cord member 321 which branches from the cord member 32. Current is supplied to the light 4 via the cord member 322 which branches from the cord member 32. Current is supplied to the small resistance level 12a via another cord member 32a which branches from the cord member 32.

[0043]

[Effect of the Invention]Hair is efficiently removable in hair removing method \*\*\*\*\* using the portable hair stripper and this device of this invention, and a short time. When removing, it is not accompanied by a pain or a hair root is not damaged.

[0044]Since cautery cutting of the hair is carried out according to this invention, the cutting plane of

hair becomes smooth, and the skin rubs and it does not get damaged. Especially, a partner's skin or membrane is not damaged at the time of sexual intercourse, or painful itching paraesthesia is not given to a partner. Therefore, spread of an infectious dermatology system disease, a venereal disease, etc. can also be prevented beforehand.

[0045] Since the hair ends of hair can be arranged easily according to this invention, the hair neglected without repairing is involved in between membrane etc. at the time of sexual intercourse, etc., and can prevent what is called a hair piece phenomenon that damages a reproductive organ etc.

[0046] When forming the filter part 343 for dust collection, it becomes unnecessary to use consideration special to settlement of the removed piece of hair. When forming the filter part 344 for deodorization, diffusion of the nasty smell generated by cautery of hair can be prevented.

[0047] In forming the light 4, when according to this invention avoiding the public notice on the way etc. and removing hair on the closed ring boundary where Lighting Sub- Division is insufficient, it becomes unnecessary to use supplemental lighting instruments, such as a flashlight, and hair can be removed certainly and safely.

[0048] Therefore, according to this invention, the cheapness, the portable easy and safe hair stripper, and method of the various sickness and wound of a dermatology system or a urology department system that generating and infection can be prevented are realizable.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[ -- figure 1] It is a cross- sectional view showing working example of a portable hair stripper.

[ -- figure 2] It is A-A drawing of longitudinal section showing working example of a portable hair stripper.

[ -- figure 3] They are schematics of the electric system of a portable hair stripper.

[Description of Notations]

1 Comb- like part

11 Tooth part

111 Gear tooth

11a Paragnath part

111a Paragnath

12 Resistance level

12a Small resistance level

2 Articulated section

3 Grasping part

31 Power supply section

311 A dry cell or a battery charger

312 Receiving device

323 Lid member

32, 321, 322, 323, 32a cord member

33 Switch part

34 Tubular part

341 Suction opening

342 Outlet

343 The filter part for dust collection

344 The filter part for deodorization

35 Motor for driving

36 Fan part

4 Light

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(54) 【発明の名称】 携帯用体毛除去装置および該装置を用いる体毛除去方法

